

**THE CHARTER FOR THE  
INTERNATIONAL COMMITTEE ON IRRADIATED CONCRETE (ICIC) / (IC)<sup>2</sup>  
IN NUCLEAR APPLICATIONS  
Accepted and Approved, 10 October 2014**

## **1.0 PURPOSE**

The general objective of the **International Committee on Irradiated Concrete (ICIC)** is to provide a forum for broad technical interactions in research on the effects of irradiation on concrete used in nuclear applications, such as nuclear facilities, storage, and disposal sites, and which will contribute to advancing the current state of knowledge.

Specific objectives are to:

1. Provide a forum for timely, informal information exchanges among members and organizations pursuing the identification, quantification, and modeling of the effects of radiation on concrete in commercial nuclear applications. Specifically, determinations of the effects of radiation damage as reflected by changes in engineering properties and their application to concrete are included.
2. Promote broad application of highly specialized or unique investigation techniques to relevant research materials of wide interest to develop improved understanding and predictions of the effects of radiation on concrete, cementitious composites, and its constituents.
3. Facilitate the conception, planning and guidance of new cooperative research programs, for example, by:
  - 1) Facilitating the collection (harvesting) and distribution of pedigreed materials suitable for concrete irradiation damage investigations and non-destructive testing (NDT).
  - 2) Promoting cross-institutional utilization of resources, where possible, which reflect mutual research interests or needs.
  - 3) Promoting and coordinating research on special problems.
4. Promote the transfer of research results to general codes and standards for the evaluation of engineering property changes. .
5. To achieve these goals and objectives, symposia or workshops should be held to promote the dissemination of advances in understanding the effects of radiation on concrete and related materials.

## 2.0 STRUCTURE:

### 2.1 Membership Requirements, Obligations, and Rights

- 2.1.1 **Organizational Membership** in the ICIC is restricted to those organizations that are currently performing, managing, and / or funding research and development efforts relevant to the objectives of the ICIC.

**Each Organizational Member designates a Principal Contact** and agrees to make every reasonable effort to ensure that the Principal Contact or a designated alternate attends each ICIC meeting. Principal Contacts of Organizational Members have the right to recommend and approve appointments to the Executive Committee and changes to the Charter.

**Principal Contacts are responsible** for ensuring that members of their organizations and their invitees to meetings (see Section 2.1.5) abide by the requirements of the Charter, in particular regarding dissemination of information (Section 3.0).

- 2.1.2 **Individual Members** (this term includes Principal Contacts and members of the Executive Committee) in the ICIC must be employed by an Organizational Member and be actively involved in research and / or facilitating or supporting research relevant to the objectives of the ICIC. As appropriate, the views of those Individual Members present at ICIC meetings on matters regarding the general operation of the ICIC will be gauged by show of hands.

- 2.1.3 **Processing of applications for Membership.** New applications for membership and/or member nominations for a new Principal Contact will be sent to the Secretary. The application should include evidence that the membership requirements of Section 2.1.2 and, for a new organization, Section 2.1.1 can be met. In the case of a new Individual Member this may consist of a brief resume and list of relevant publications, reports, or activities. The Secretary then distributes copies of the applications to the Executive Committee for review. Two procedures are available for membership review and approval: (1) Each Executive Committee member sends a written (electronic) recommendation for approval (or disapproval) to the Secretary within 30 days after its receipt, and the application is approved if supported by at least 3/4 of the Executive Committee; (2) Membership application may be made and approved during a meeting of the Executive Committee. All applications will be acted upon fully within 2 months.

- 2.1.4 **Obligation to attend the General Meetings.** If an Organizational Member is not represented at two successive ICIC General Meetings, its membership will cease pending Executive Committee review. Normal membership application may be required before further participation is possible.

- 2.1.5 **Participation in General Meetings.** Participation in General Meetings is normally limited to those members who are contributing information as an author or co-author of a presentation to be given at the meeting. With the approval of a majority of the Executive Committee Officers, this requirement may be waived. Moreover, with the approval of the Officers, a Principal Contact or a Member of the Executive Committee may invite someone to participate in a meeting without applying for membership, provided that the invited participant makes a presentation and agrees to abide by the ICIC rules regarding

confidentiality and dissemination of information (Section 3.0). Each presenter is required to provide a complete electronic copy of the presentation to the organizing committee for the meeting record (see 3.0). In special circumstances, a Principal Contact may request a non-member attend without presentation, which also must be approved by the Officers. In this case, an attendee will not be given copies of the presentations (Sections 3 and 4).

## **2.2. Organizational Structure**

**2.2.1 Executive Committee.** The ICIC Executive Committee consists of three Officers (a Chairperson, a Vice-Chairperson, and a Secretary), the Technical Area Coordinators, and immediate past ICIC Chairperson.

**2.2.1.1 Duties of the Executive Committee** include setting the general theme for each meeting (including decisions regarding special plenary presentations, workshops, etc.), selecting the date, location, and local host for each meeting based upon proposals received from any member, arranging the ICIC General Meetings, preparing meeting agendas, facilitating memberships.

**2.2.1.2 The Chairperson** serves for one General Meeting, which can be renewed for a second General Meeting by vote of the Principal Contacts.. After serving that period, he or she will be succeeded by the Vice-Chairperson.

**2.2.1.3 The Vice-Chairperson** will assist the Chairperson as requested and will serve in the absence of the Chairperson.

**2.2.1.4 The Secretary** will assist the Chairperson and Vice-Chairperson as requested, will prepare a draft agenda for each Executive Committee meeting, will record minutes of each Executive Committee Meeting, and will accomplish other tasks as delineated in various sections of this charter.

**2.2.2 Technical Area Coordinators (TACs).** Specific technical areas (TA) (research / engineering / technical) may be identified by the Executive Committee to facilitate advances in the area of irradiated concrete. For each TA, a TAC shall be nominated by the EC for approval by vote of Principal Contacts (see 2.2.3). There is no explicit term of service for TACs. A main function of a TAC is to facilitate and expedite progress by the membership in a specified technical area. The TAC also arranges that portion of the General Meeting dealing with his or her activity area and is responsible for a written summary of any issues, accomplishments identified by the presentations, and subsequent discussions.

**2.2.3 Appointment of Executive Committee Members, Officers, and TACs.** When an opening for an Officer arises, the Chairperson will seek suggestions for nominees from Principal Contacts and members of the Executive Committee. He or she will then draw up a short list of candidates in consultation with other Executive Committee members. Criteria for including candidates will include their suitability for the position, including their future availability and willingness to stand, and the need to maintain a balance of membership on the committee that represents the general membership. The Secretary, or in his or her absence the Chairperson, will send the list to Executive Committee members each of whom may cast as many votes as there are positions. Votes cast more than 30 days following

distribution of the list will be void. The candidate receiving the most votes will receive the appointment. In the event of a tie, the Chairperson will have an additional casting vote.

When an opening for a TAC arises, the procedure will be as that for an Officer, except that Principal Contacts as well as the Executive Committee members will be entitled to vote. Voting will normally be by email to the address last notified to the Secretary.

The immediate past ICIC Chairperson is appointed as an Executive Committee member when his/het term as an officer ends.

**Removal of an Executive Committee Member:** If a member of the Executive Committee behaves in an inappropriate or unethical manner, is incapacitated and unable to participate in the ICIC, or is no longer working in an irradiated concrete related field, the Secretary will be authorized by the Officers to inform the member and entire Executive Committee of the offense and the intent to hold a vote of removal within 45 days of the notification as well as the right of the member to contend the charges within 45 days of the notification. The decision to remove an Executive Committee member for a specified cause will be made by a majority of those casting votes.

### **3.0 DISSEMINATION OF INFORMATION:**

#### **3.1. Information specifically developed or contributed by a Member or invited non-member:**

Information specifically developed or contributed by a member (or invited non-member presenter as described in section 2.1.5) will not be disseminated, formally or informally, to outside bodies or individuals without the specific and explicit approval of the contributor and notification of the Executive Committee. Such information may be disseminated to non-members within an Organizational Member, but the Principal Contact must ensure that it is not disseminated further. Moreover, information discussed and disseminated at the ICIC General meetings shall be focused on technical issues intended to advance research on the effects of radiation on concrete used in nuclear applications. It should not include commercially or business sensitive information or other information that could be considered sensitive from the competition law point of view.

The proceedings of the General Meeting will consist of electronic copies of presentations and discussion summaries (prepared by the TACs) and shall be provided to all members and to all non-member presenters.

The proceedings will not be given to non-member, non-presenting attendees. Any material or information deemed to be of a restricted nature will be so identified by the contributor in advance and will not be included in the meeting record.(Section 2.1.5).

The Secretary will prepare minutes of the Executive Committee meeting for distribution to each Executive Committee member.

### **3.2. Information Developed by a Coordinated Activity of the ICIC**

Information developed through a Coordinated Activity of the ICIC (see Section 1.0 Objectives) will be provided to all participants of the Coordinated Activity in cooperation with co-sponsoring technical or educational organizations.

### **3.3. Distribution of published / public information**

The secretary will maintain a distribution list of where members may submit published materials to disseminate to members of ICIC. This list will be established to allow previously restricted information, which becomes public, to reach members in a timely fashion.

### **3.4. Website for information**

As appropriate, the secretary and executive committee will establish a dedicated website with both public and private (restricted) access depending on the nature of the information.

### **3.5. Misuse of information**

If a member believes that another member or guest misused information presented at an ICIC meeting, that member should notify the Executive Committee in writing of his or her concerns.

The Executive Committee must inform the person accused of misuse and provide at least 45 days for the accused person to respond in writing to the charges. The Executive Committee may request input from other members and outside technical experts as part of the process of gathering information. The Executive Committee will review the information provided by the member filing a complaint, any response by the person accused, and any additional information gathered by the committee and make a determination as to whether misuse occurred and what if any sanctions should be imposed on the person responsible, and possibly on the Principal Contact, with 120 days of receiving the complaint.

Determinations and sanctions may include:

- Acquittal of the charges
- Request for additional information
- Letter of Reprimand and request for apology to Membership
- Suspension of membership in the ICIC
- Termination of membership in the ICIC
- Requesting that the Organizational Member replace its Principal Contact

## **4.0 MEETINGS**

General Meetings of the ICIC will be held at intervals of approximately every 12 – 18 months. The language of the meetings will be English.

At each General Meeting, the Executive Committee will recommend the dates and location for the subsequent General Meeting to the members.

Each General Meeting will last approximately two (2) - three (3) days, one (1) – two (2) days of which typically will be devoted to technical discussions/presentations in workshop format and one (1) to two (2) days devoted to open presentations.

Attendance at the open session will be by member invitation (with advanced notification to the Executive Committee) and may include interested technical experts, researchers, managers, or sponsors.

Attendance in the “technical workshop” will include ICIC members and individuals who have unique or specialized information applicable to irradiated concrete research. The Technical Area Coordinators, in coordination of the Executive Committee, will invite these individuals provided that the invited participant makes a presentation and agrees to abide by the ICIC rules regarding confidentiality and dissemination of information (Section 3). Each presenter is required to provide a complete electronic copy of the presentation to the organizing committee for the meeting record (Section 3). In special circumstances, a Principal Contact may request a non-member attend without presentation, which also must be approved by the Officers. In this case, an attendee will not be given copies of the presentations. (Section 2.1.5)

A meeting of the Executive Committee will normally precede each General Meeting. Additional meetings of the Executive Committee and the various Task Groups will be held on an as-needed basis.

## **5.0 CHANGES TO CHARTER**

The Officers will be responsible for ensuring that the requirements of the Charter are met, while the Secretary will be responsible for drafting amendments to the Charter to meet the changing requirements of the ICIC.

Any member may recommend changes to the Charter. The Secretary will send proposed Amendments to the Charter to Principal Contacts for a vote within 30 days of a formal proposal.

The voting will be by e mail and will be adopted if over 2/3 of those Principal Contacts who respond within 45 days of the email being sent are in favor. Failure to respond will be assumed to be an abstention. The Secretary will notify all members of the outcome and distribute, if an amendment has been adopted, a revised Charter to all members within 45 days of adoption of the amendment.

## **ADDENDUM**

### **Resource Sharing / Leveraging:**

- Service Irradiated Concrete Cores
- Characterization of harvested cores
- Pre-Irradiation Evaluation Characterization.
- Post Irradiation Evaluation Characterization
- Round Robin Testing
- Establishing Characterization Protocols
- Modeling and Damage Mechanisms.

### **ESTABLISHING CHARACTERIZATION PROTOCOLS:**

- Mechanical Testing (compressive strength, elastic modulus, etc.)
- Phase composition (with XRD)
- Microstructure (TEM/SEM/ Optical Microscopy)
- Porosity (Total)
- Dimensional changes (resolution)
- Mass (changes)
- DTA (water, portlandite, and carbonate content)
- Hardness (nano indenter)
- Sorption balance
- Pore size
- NDE

### **COORDINATED RESEARCH ON SPECIAL PROBLEMS:**

- IAEA CRP
- RILEM
- ASTM